

Title (en)  
LIQUID CRYSTAL DISPLAY APPARATUS

Title (de)  
FLÜSSIGKRISTALLANZEIGEVORRICHTUNG

Title (fr)  
APPAREIL D'AFFICHAGE À CRISTAUX LIQUIDES

Publication  
**EP 2434332 A4 20130102 (EN)**

Application  
**EP 10793882 A 20100305**

Priority  
• JP 2010053634 W 20100305  
• JP 2009157778 A 20090702

Abstract (en)  
[origin: EP2434332A1] In a liquid crystal display apparatus (1) comprising: a liquid crystal panel (2); an illuminating device (3) for irradiating the liquid crystal panel (2) with illumination light; and an outer casing for accommodating the liquid crystal panel (2) and the illuminating device (3), the outer casing includes a bezel (4) provided on the liquid crystal panel (2) side and a frame (frame member) (5) configured so as to be contained within the bezel (4) and having side walls (5b) to which a mounting board (9) on which light-emitting diodes (8) are mounted is attached. A protruding portion (thermally conductive portion) (14) for transferring heat generated by the light-emitting diodes (8) from the frame (5) side to the bezel (4) side is provided between the side surface (4b) of the bezel (4) and the side wall (5b) of the frame (5).

IPC 8 full level  
**G02F 1/1333** (2006.01); **G02B 6/00** (2006.01); **G02F 1/13357** (2006.01)

CPC (source: EP US)  
**G02B 6/0085** (2013.01 - EP US); **G02F 1/133615** (2013.01 - EP US); **G02F 1/133308** (2013.01 - EP US); **G02F 1/133628** (2021.01 - EP US)

Citation (search report)  
• [XI] US 2009160745 A1 20090625 - KIM TAEK-YOUNG [KR]  
• [X] JP 2008020557 A 20080131 - EPSON IMAGING DEVICES CORP  
• [A] JP 2008186780 A 20080814 - MITSUBISHI ELECTRIC CORP  
• [A] JP 2006216244 A 20060817 - TOSHIBA MATSUSHITA DISPLAY TEC  
• See references of WO 2011001711A1

Cited by  
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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)  
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**EP 10793882 A 20100305**; BR PI1015583 A 20100305; CN 201080029883 A 20100305; JP 2010053634 W 20100305; JP 2011520806 A 20100305; RU 2011146532 A 20100305; US 201013320917 A 20100305